

# BIOCHEMISTRY AND MEDICAL GENETICS, PH.D.

Biochemistry and Medical Genetics

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**Academic Staff:** Please refer to the Biochemistry website (<https://umanitoba.ca/medicine/biochemistry-and-medical-genetics/faculty-staff/>) for Faculty information.

## Biochemistry and Medical Genetics Program Information

The department offers programs leading to the Masters of Science and the Doctor of Philosophy degrees. There are a wide range of potential thesis projects broadly related to one of the following areas of research: cancer, computational biology, epigenetics, genetic basis of development and disease, and regenerative medicine.

## Admission Information

### Admission to the Faculty of Graduate Studies

Application and Admission Procedures are found in the Academic Guide (<https://catalog.umanitoba.ca/graduate-studies/academic-guide/application-admission-registration-policies/>).

Admission requirements for doctoral students are found in the Doctor of Philosophy General Regulations (<https://catalog.umanitoba.ca/graduate-studies/academic-guide/doctor-philosophy-general-regulations/>) section of the Guide.

### Biochemistry and Medical Genetics Ph.D. Admission Requirements

A thesis-based Master's degree (of at least 2 years in duration), or equivalent, in biochemistry, genetics, or a closely related field, from a Canadian university is required for direct admission to the Ph.D. program. In addition, a cumulative GPA of 3.5 (4.5 scale), or equivalent, and no grade less than C+ in the courses taken during the Master's program is required.

Generally, there is no direct entry into the Ph.D. program for students with Master's degrees from non-Canadian universities. Admission will also depend upon the availability and willingness of a Faculty Member to supervise the student and resources to support the student's research.

### TRANSFER TO A PH.D. PROGRAM

Students registered for a Master's degree who have made excellent progress over the first year in their program may be considered for transfer to the Ph.D. program. The transfer process, as outlined in the supplemental regulations, must be completed within 16 months of the student's commencement in the Master's program.

## Application Information

Students should complete and submit their online application with supporting documentation by the date indicated on the Biochemistry and Medical Genetics Ph.D. program of study (<https://umanitoba.ca/explore/biochemistry-and-medical-genetics-phd/>) page.

## Degree Requirements

Students who transition from the M.Sc. program are required to take 6 credit hours (in addition to the 10 credit hours required in fulfillment of the MSc program). Students holding a thesis-based M.Sc. degree who enter directly into the Ph.D. program must take a minimum of 9 credit hours.

A written thesis is required for the Doctoral degree.

**Expected Time to Graduate:** 4–5 years

## Progression Chart

Course	Title	Hours
<b>Year 1</b>		
GRAD 7300	Research Integrity Tutorial	0
GRAD 7500	Academic Integrity Tutorial	0
BGEN 8000	Research Seminar Ph.D. <sup>1</sup>	1
Select two of the following:		6
IMED 7120	Medical Biochemistry <sup>2</sup>	
IMED 7170	Medical Genetics <sup>2</sup>	
IMED 7280	Medical Computational Biology <sup>2</sup>	
Additional course(s) to be chosen by the student and his/her advisor and/or advisory committee		3
<b>Hours</b>		<b>10</b>
<b>Years 2-4</b>		
GRAD 8000	Doctoral Thesis	0
BGEN 8000	Research Seminar Ph.D. <sup>1</sup>	1
<b>Hours</b>		<b>1</b>
<b>Total Hours</b>		<b>11</b>

<sup>1</sup> Students must enroll in BGEN 8000 every Fall and Winter term of program enrollment.

<sup>2</sup> If, after consultation with the student's advisory committee, the course coordinator, and the Graduate Student Affairs Committee, it is deemed that a student has already completed or holds a course equivalent to IMED 7120, IMED 7170 or IMED 7280 then alternative coursework will be selected as agreed by the student's advisor or advisory committee.

## Registration Information

Students should familiarize themselves with the Faculty of Graduate Studies 'GRAD' courses applicable to their program (<https://catalog.umanitoba.ca/graduate-studies/registration-information/>). If you have questions about which GRAD course(s) to register in, please consult your home department/unit.

All new and returning graduate students in the department of Biochemistry and Medical Genetics are required to complete a Course Approval Form in consultation with their supervisor **prior** to registering for courses and making program changes. The Course Approval Form must be signed by the student, supervisor, graduate chair or the department head and submitted to the graduate program coordinator. Only courses

that are included on the Course Approval Form will be credited to the student's program. All course additions and withdrawals (registration revision) must be approved in the same manner by completing or filling out the Registration Revision Form available on the website.

Consult the department office or browse the web for a list of course offerings.

It should be noted that not all courses are offered every year and some courses will be held only with a minimum enrolment. Please check the Aurora catalog to find out when a course is offered.

## Regulations

Students must meet the requirements as outlined in both Supplementary Regulation and BFAR documents as approved by Senate.

### Supplementary Regulations

Individual units may require specific requirements above and beyond those of the Faculty of Graduate Studies, and students should consult unit supplementary regulations (<https://umanitoba.ca/graduate-studies/supplementary-regulations/>) for these specific regulations.

### Bona Fide Academic Requirements (BFAR)

Bona Fide Academic Requirements (BFAR) (<https://catalog.umanitoba.ca/graduate-studies/academic-guide/academic-performance-general/#BFAR>) represent the core academic requirements a graduate student must acquire in order to gain, and demonstrate acquisition of, essential knowledge and skills.

All students must successfully complete:

- GRAD 7300 prior to applying to any ethics boards which are appropriate to the student's research or within the student's first year, whichever comes first; and
- GRAD 7500 within the first term of registration;

unless these courses have been completed previously, as per Mandatory Academic Integrity Course (<https://catalog.umanitoba.ca/graduate-studies/academic-guide/academic-performance-general/#GRAD7500>) and Mandatory Research Integrity Online Course (<https://catalog.umanitoba.ca/graduate-studies/academic-guide/academic-performance-general/#GRAD7300>).

Students must also meet additional BFAR requirements (<https://umanitoba.ca/graduate-studies/student-experience/core-academic-requirements/#additional-requirements-by-program>) that may be specified for their program.

### General Regulations

All students must:

- maintain a minimum degree grade point average of 3.0 with no grade below C+;
- meet the minimum and not exceed the maximum course requirements, and
- meet the minimum and not exceed the maximum time requirements (in terms of time in program and lapse or expiration of credit of courses).